

number of occasions systematic diving after fallen acorns in 2-3 feet of water. Brief splashing plunges under water may be observed in the case of parties playing and chasing one another and wounded or moulting birds or ducks molested by drakes will also seek to escape by diving. C. W. Townsend and Phillips consider that wings are used to some extent under water and the latter author is 'sure that very young birds spread the wing rudiments while diving.'—B.W.T."

The evidence is limited, but it appears possible that the Black Duck will prove to closely resemble the Mallard in its diving habits and that there may be a regional difference in behaviour between the Black Duck in Australia and the same species in New Zealand.

—ERIC H. SEDGWICK, Collie.

*Myobatrachus gouldii* in the Coastal Hills near City Beach.—On August 4, 1957, I was searching for termites for feeding lizards in my terrarium at City Beach. In the course of this work I turned over a big old Banksia log lying in rather dense scrub in the sandhills about 300 yards to the north-east of the City Beach School. The bark came off very easily and as expected hundreds of termites were given the alarm. My attention was immediately drawn to a little frog which had fallen on its back by the disturbance and which was showing its light-coloured and spotted belly. At first sight it rather reminded me of *Pseudophryne guentheri* but closer checking indicated that it was *Myobatrachus gouldii*—a very small specimen only 15 mm. in total length. Dr. A. R. Main, who saw the frog later in the day, stated it was the smallest of the species he had ever seen, and believed it to be about three months old.



The frog, *Myobatrachus gouldii*, in the hand.

Photo, G. A. Philipp.

Later a similar-sized individual was found at the same log. The first frog had been definitely, and the second almost certainly, inside the log. This may indicate that the frogs live the first few months of their lives inside logs above ground level.

During the following days, up to September 22, I found 11 more *Myobatrachus* within an area of about 100 yards square. The total lengths of seven of these frogs were: 15, 27, 27, 37, 42, 44 and 47 mm. Outside of this area, although conditions appeared similar, no frogs were found. The habitat consisted of damp sandy soil, overgrown with scrub shielding off the sun. There were plenty of old *Banksia* and *Tuart* logs, decayed and partly embedded in the soil. The 11 frogs found subsequently were not found in the logs but were revealed when the logs were turned over. They were under the logs or buried in the sand beneath. No more than two individuals were found under any one log and these were 6 ft. apart under a large 9 ft. log. Calaby states (*W.A. Nat.*, 5, 1956: 94) that "specimens of this frog are difficult to obtain and all known specimens have been found by accident. In three years of collecting termites as a hobby the author has found only two specimens of the frog, both under logs."

Some of the frogs collected were kept alive in an outdoor terrarium and two lived for three months before they disappeared. The frog burrows head first with a few movements of its strong front legs, using its hind legs only to push its way into the sand. It comes to the surface only during the night and is seen to be constantly cleaning its eyes with its front legs, the movements being from the ear towards the mouth—right leg over the right eye, left leg over the left eye. It does not jump and it cannot swim. When placed in water it only tries to run faster. There is a complete absence of the usual simultaneous "frog movement" of the hind legs while swimming. One morning I noticed that two of the frogs had escaped from their container in the laundry and they were later found hiding under the rug in the living room, about 15 yards away. This suggests that they are able to cover considerable distances during the night. They may wander around on wet nights, probably during the mating season.

In very dull light it was observed that termites are taken with a flick of the tongue as soon as the insects approach within reach, which is about 5-10 mm. *Myobatrachus* is very dexterous with its tongue. I once noticed one taking a termite from its own head. Eating is very fast at times—10 to 20 termites being devoured within a few seconds. Notwithstanding that the frogs depend on termites for food they are apparently vulnerable to their attack. If a frog should be dropped unceremoniously among disturbed termites it shows signs of panic and the soldiers bite at it. In nature the frog works very quietly among the termite galleries so as to cause the minimum of disturbance.

Of the specimens collected five were handed to the Western Australian Museum, five were given to Dr. A. R. Main and three escaped.

—G. A. PHILIPP, City Beach.